

LETTERS

A Defense of SAMS By the School's Director

Dear Sir:

In the last several editions of *ARMOR*, there has been some discussion about the School of Advanced Military Studies (SAMS). I want to present the facts about SAMS to you — the officers whom I hope someday will consider applying to the school. Soon, you will have to make informed decisions about pursuing your military education. Following are the facts about SAMS to help you make those decisions.

The founding vision of SAMS was to increase the military judgment and practical mastery of selected officers in combined arms warfare and all its ramifications. Over the 15 years of the school's existence, that vision has not changed. SAMS works to stimulate an officer's intellect so that he or she can overcome tough operational challenges in peace, crisis, and war. It stresses the development of how to think over what to think and has at its foundation the integrated, focused study of military history and military theory relating to the evolution of operational art.

Military history provides us the observed results of action — the factual accounting of decisions and the events that impacted them. In a complementary way, military theory attempts to order observed action and to establish cause-effect relationships — this happened because.... The military theorist applies his experience, logic, and reason to understand why events turned out the way they did, and why commanders made the decisions they made. In a like way, theory attempts to determine the impacts technologies have on the conduct of war. With the foundations of history and theory established, students move into the heart of SAMS — the exercise program.

The exercise program is SAMS' laboratory. Students apply theories to a broad range of complex, ambiguous operational and tactical problems. They analyze them and tear them apart to determine what did and didn't work in a given circumstance. During the process, they develop their own insights into the nature of operations and the relationships between military art and science. Similarly, they digest the military decision-making process piece by piece from the perspectives of both the commander and the staff officer. They begin to develop an understanding of battlespace visualization, of describing the visualization to direct action, of the necessary information requirements and personal relationships between the commander and his staff, and the absolute requisite of preparing complete yet understandable plans and orders for execution.

Do we study Clausewitz? You bet, and in great detail. Carl is in good company — we also dissect Jomini, Grant, Corbett, Mahan, Douhet, Fuller, Liddell-Hart, Mitchell, Svechin, Guderian, Mao, Senge, Warden, Naveh, and

others. Why? We do so because they had or have something to say about our understanding of operational art and our profession.

I frequently hear officers utter the phrase, "Our business isn't rocket science." They are only partially correct. Our profession isn't rocket science — it is infinitely more difficult! The complexities of today's operations environments and the faith the soldiers we lead have in our abilities to achieve victory at the enemy's expense, not theirs, demand that we not switch our brains into the checklist mode. We must out-think, out-act, and outmaneuver any bad guy on the block. We must be versatile, flexible, and adaptive. These attributes require a developed intellect and firm understanding of the profession of arms. SAMS helps develop both.

SAMS graduates depart Fort Leavenworth after two years of study to assume key battle staff positions in every one of our active duty divisions and corps. There, they are expected to assume battle staff training and leadership roles. These duties are no place to showcase individual talent. Actions of these formations in war and military operations other than war are integrated joint, multinational, and interagency team operations. Our commanders will not tolerate individual, go-it-alone efforts, period. Commander expectations served as one of several data points when I wrote my director's statement last year.

I encourage all of you to read my director's statement. It is on the web, accessible at www.cgsc.army.mil. My intent was for it to serve as an internal SAMS direction document. I wanted to remind all within the school that we cannot rest on our laurels. To remain relevant and responsive to the needs of the Army, we need to be critically introspective of the curriculum and our methods. We need to evaluate factors that may indicate change, including the implications of today's operations environments and the impacts that ever-increasing technological capabilities have on the conduct of full-spectrum operations. In the course of writing it, I had literally hundreds of conversations with commanders and staff officers in the field, students, alumni, and faculty members. I felt after these discussions that I could articulate the expectations that the field has of SAMS graduates. Read the expectations and understand what you will commit to if you elect to pursue a SAMS education.

SAMS is a continuous work in progress. It must remain in a dynamic state of introspective analysis and action if it is to remain attuned to the forces acting upon it and the Army. Within the school, the direction statement has had an effect. We —

- ✓ Conducted an exhaustive review of the curriculum and implemented several major changes.
- ✓ Integrated the study of history and theory and strengthened the exercise program.

- ✓ Are experimenting with the use of off-the-shelf simulation software to enhance several campaign-planning practical exercises and to enhance wargaming.
- ✓ Are establishing a senior mentorship program and developing several military colloquia sessions.
- ✓ Are developing the information architecture to enable outreach and reach back with the distributed body of SAMS alumni worldwide.

Selection to SAMS is an open and competitive process. This year, the school composition is 46 active duty Army officers, 4 USAF officers, 2 Marines, and 1 Canadian officer. This year, we also have our first Army National Guard officer. The requirements for application to SAMS are simple:

- ✓ Resident or nonresident C&GSC graduate, and volunteer
- ✓ Recommended by their chains of command
- ✓ Take an examination
- ✓ Interview with the SAMS Director.

After these are completed, the CGSC department directors vote applicants' files. We establish an order of merit list and fill the class. The selection process is fair and equitable. All applicants have a level playing field.

My office phone number is (913) 758-3313. Please call me if you want to know about the direction of SAMS, the dedication of its students and faculty, and its continued importance to the Army.

ROBIN P. SWAN
Colonel, Infantry
Director, School of Advanced
Military Studies

The Medium-Weight Force: Reinventing the Wheel?

Dear Sir:

Fully realizing the impact a medium force would have upon the United States Army, Marines, Reserve and Guard Forces would take volumes to discuss. The implications cross numerous lines of responsibility, including military contractors, their civilian employees, and ancillary service providers. While I understand that this issue has only been discussed within a "draft copy" basis by our Chief of Staff, it is a factor affecting the entire force and its supporting economy.

To the average soldier, the main battle tank is a force multiplier readily available within the forward line of battle. Close air support and indirect fires are allocated within the commander's operation order, thus they are not a direct asset to the average soldier. The tank is physically present during the battle, providing direct fire and maneuver to the soldier on the ground. It represents a tangible asset that plays a vital part in the success of the mission,

physically and psychologically. As maneuver elements, we have already lost one company per battalion — taking our MBTs and IFVs will only weaken the force.

The proponents for the medium force will expound the need to mobilize and deploy within a given timeframe to gain success on the modern battlefield. It does our troops no service to accomplish this action with supporting fires that limit the ability to destroy and maneuver against “third world” forces supplied with former Soviet Union heavy armor. Wheel vehicles will remain limited by the wheel — a technology as old as man himself. The trade-off of wheeled vehicles and track vehicles include weight, cost, maintenance, and rapid deployment. The most important factor is seemingly overlooked in the Chief of Staff’s proposal — the soldier’s life and fighting spirit.

Armor is vital to maintaining the edge in the new millennium battlefield. Technology opens new doors every day, including the enemy’s capability to produce lethal anti-armor weapons. Wheel vehicles offer little protection or confidence to the field soldier. Technology cannot build a better wheel, but it can provide a better alternative, many of which are discussed within these very pages. Tracks are an integral part of force structure and should remain the cornerstone until technology produces a true alternative.

ALFRED C. PRILL
1LT, AR, TXARNG
Platoon Leader
Co. B, 3-112th Armor
Stephenville, Texas

German Tank Expert Doubts Merkava’s Survey Rating

Dear Sir:

Thanks to *ARMOR*, we finally discover that for almost 10 years, Forecast International’s Weapons Group has assessed tanks and ranked them. (See pg. 13, July-August 1999 *ARMOR* -Ed.) But apparently, their work, ordered by so-far-unknown customers, was not published or made known. Anyway, I had never heard about such an endeavor and I have worked on international panels and groups since 1968 and was the Bundeswehr Tank Program Manager from 1981 to 30 September 1991. In that capacity, I was naturally very pleased to find Leopard 2 A5/A6 ranked in first place. So after reading the shortened version in *ARMOR*, I finally got to read the whole paper.

The authors rightfully state that such assessment is subject to personal doctrinal, nationalistic(?) and other factors and could be useful when compared to other (?) assessments by other knowledgeable(!) observers. Their ranking is a reasoned analysis, based on technical factors, user reports(?) and doctrines of the tank-developing nations. Their selection criteria limit the choice to tanks in production or ready for production. From there they chose 10, ranking from 1 to 10. I do not

want to go into too many details, but rather state a few observations...about “ranking” complex systems with a few criteria, somewhat randomly selected.

Until a few years ago, we basically had two kinds of tanks — NATO tanks for the defense of Central Europe and Soviet tanks for a possible attack of Central Europe. Modern NATO tanks are heavier and more sophisticated, with superior fire control, communication and control equipment, and especially all-weather optical-electronic sights. The requirements called for defense and counterattack under the climatic and terrain conditions of Europe.

The Red Army had different requirements — tanks to attack NATO defense lines, gain terrain, and play havoc with NATO’s logistics.

If you would assess and rate tanks — which one is No. 1 and which No. 2? This shows clearly that you can rate tanks on singular properties without many problems like weight, size, gun caliber, rate of fire, power-to-weight ratio, but that of course is in no way to be interpreted as a measure of a tank’s overall performance.

A tank is developed according to the requirements of a specific user. If one wants to assess a tank’s abilities or properties, it has to be done against these requirements. If several parties with differing requirements should undertake to assess the same tanks against those requirements, then it is quite logical that the outcome and a “ranking” could show different tanks to be No. 1. Only when the assessment of several tanks against the same requirement shows ranking numbers, then it is to be assumed that for said requirement the ranking is correct. In this sense, I am pleased to state that the armies of the Netherlands, Switzerland, and Sweden assessed Leopard 2, M1A1/A2, Leclerc, Challenger 2, and T80U (Sweden assessed all tanks, the Netherlands and Switzerland only the first two) against their national requirements. In all cases, Leopard 2 came out No. 1, M1A1/A2 No. 2. Do not get me wrong; all tanks are formidable fighting machines and if one could not have one, one of the others would very probably fulfill almost all requirements as well... Again, do not get me wrong, Leopard 2 is the tank of our choice, and with very good reason. The other armies had probably very similar requirements, therefore, Leopard 2 came out as tank of their choice as well. And let us not forget — offset is a very serious factor in any contest.

In short, I do not think that a ranking or assessment of those factors, as stated by Forecast International Weapons Group, is a method by which one can choose a tank. It has to be done against a set of requirements.

Particularly short-changed in this ranking assessment is Merkava. Talik, as MG (Ret.) Israel Tal is commonly known, has done a great job in developing and enhancing Merkava I, II and III, and his work on Merkava IV will undoubtedly produce a very modern tank that will meet the requirements of most tank users.

So, why did they rank Merkava as No. 10, way behind the Japanese Type 90 (rated No. 3), about which very little can be substantiated through facts, the Challenger 2 with Challenger 1 chassis and a rifled 120mm gun (the ammo is not interchangeable within NATO, or Merkava, or the Japanese Type 90 smooth-bore 120mm gun). The T80UM is ranked No. 6, followed by Korean type 88/120, which beat the Russian T-90 out as No. 7 and the T-90 to be followed by a grotesquely outperformed T-72 in Desert Storm. All these tanks are ranked before Merkava Mk III, that no user other than the Israeli Defence Force has so far tested, but that has seen battle on numerous occasions and fared very, very well then.

The raters state that Merkava III is a formidable tank, the protection level among the best in the world due to unique design and advanced modular armor, “fairly advanced level of vehicle electronics and fire control” (?), to include a threat warning system. Does all that justify a No. 10 rating — certainly not! I almost forgot to mention that they also found several features in Merkava III that are “entirely unique!”

They then state that by “Western European standards” (whose?), the Merkava is deficient in terms of battlefield mobility because of the anemic power-to-weight ratio, much lower than acceptable by most other leading tank-developing nations.

But then they state that this tank reflects the unique requirements and doctrine of Israel and that this tank represents the best balance of a tank: to move, communicate, and shoot for the Israeli Defence Force. So, they downgrade the tank for an “anemic power-to-weight ratio,” which they equate with “deficient battlefield mobility.” The raters obviously never were in Israel, the desert of the Negev (Sinai), the mountains and hills of the Golan and Galilee, to look at the terrain and the requirements of this terrain to the running gears of tanks. I have seen quite a few demos in those areas and had the opportunity to drive and shoot the tank myself. The overall terrain performance of Merkava is very, very good; sure, a few more horsepower would do the tank good — or even better, but I have some doubts whether some of our more sophisticated and better-powered tanks would keep up with Merkava III in said terrain. Keep in mind: our tanks were developed according to *our* requirements — and we have no desert or Golan Heights in Central Europe!

In summary: the raters themselves gave Merkava III credit for some, but not all, of the unique features that Talik had installed. Basing a rating on a low power-to-weight ratio without considering the terrain performance does not make sense. Merkava III is a very good, modern tank and, as stated by the raters, the tank of choice that meets the requirements of IDF best. According to their own specified rating criteria, it should get a much better rating number!

Continued on Page 46

LETTERS from Page 4

So far, Merkava has never been cross-tested with other tanks outside Israel. It looks like Turkey is the first nation to do just that. Let's wait and see how Merkava III rates against their requirements and against some other tanks. I am sure they will give it a better rating.

ALBERT KLENKE
Oberst a.D.
Sankt Augustin, Germany

The Place of Light Armor In the Army's Future

Dear Sir:

ARMOR, September-October '99, is a great issue. Lots of good "stuff."

Though I am, as a career infantry officer (mostly in light infantry formations), in tune with many of CPT Head's points in his article, "2 Para's War in the Falklands," (Cover story, September-October *ARMOR* — Ed.) I'd like to offer some food for thought.

Any infantryman would love to have the type of direct fire support the British 2 Para enjoyed, and on such a need I strongly concur.

Too often, however, we incorrectly label any tracked vehicle, no matter the armor thickness, as "armor." That label too easily equates to main battle tanks in the minds of even the most cautious of military commanders. Oh, how many times did I see the old 90mm self-propelled antitank gun (SPAT), with no armor, just an open gunner's station, used as a tank during training when I was a lieutenant in the 101st Airborne Division.

Fortunately, the British did not face any real armor, or the "light armor" they had would not have lasted but a minute. The British light armor was a tool available to the commander, and in the action CPT Head describes, the commander properly employed it.

We must make the needed warfighting available to commanders in the field. It is their duty to properly employ them, given their capabilities.

While on the subject of "light armor," a rhetorical question? Given the total spectrum of threats that today's Army must be prepared to face, why does the Army lack such a "tool" that our British cousins had the wisdom to put in their force structure?

From my porch, it seems that the Army is too hung up on the Abrams and the Bradley. I feel they are both great systems; they account for the credibility that the Army enjoys today, and they must be in the force for decades to come. However, today's threats seem to demand "light armor" a la the British. I am not talking about the 20T Fighting Combat Vehicle or the medium force vehicle (which are also needed... Applause to the new CSA), but something even lighter, say 8T to 12T, armed with a medium caliber cannon and perhaps a Javelin or two, protected against small arms

fire, and given commanders trained to properly employ it.

TY COBB, JR.
LTC (Ret.), Inf
Sparta, N.J.

Reviving the AGS For Future Army Missions

Dear Sir:

The level of protection needed by a highly mobile intermediate force that would quickly execute the enforcement of U.S. policy is a subject of great debate. The greater the protection, the slower the reaction to a fast-developing crisis. The arrival of a U.S. force that represents the global superpower, but that has an exploitable weakness, invites the temptation to win a short-term gain. Procurement of the keystone of this force would be a vehicle that can be rapidly deployed, protect U.S. forces from casualties, and be able to destroy any other vehicle or fortification. The decision makers have found themselves at a historical and critical crossroads.

The U.S. Armor Force has survived a turbulent and controversial past. Its decisions include the whole spectrum of the good, the bad, and the ugly — some of which still remain under historical review. (The recently released book, *Death Traps*, by Belton Cooper, gives excellent insight into the controversy between the M4 Sherman and the M26 Pershing.) The same factors were debated by the great leaders of the time, in the midst of a world war. The only new factor this time is the advancement in technology.

The great and almost superhuman efforts of the soldiers who fought against Tigers with grossly inferior Shermans are well documented and factored into the evolution of U.S. Armor to the point that no effort on the part of Iraq's armor force could stop the new King of the Kill Zone, the M1 tank. Desert Storm was a world lesson that, given the opportunity to move and emplace forces, we will crush you. Non-nuclear heavy ground combat is in a checkmate status. The ethnic cleansers, the land grabbers, and other assorted terrorist crackpots realize that they must do their dirty deeds in a short window of reaction opportunity. The United States intends to close that window with a check force that will only afford them two options: The first would be a costly and poor odds venture to attempt to overwhelm the check force. The second is to withdraw before the heavy checkmate force arrives and assures their annihilation. The only loophole that exists is the armor of the intermediate force. Can it withstand the weapons at the budget basement level? The answer is a simple fact. If it got there on wheels, "No!" I can go purchase a .50 cal. sniper rifle and stop it dead in the road. Worse yet, I can kill the whole crew. Add a few cheap anti-personnel mines around the vehicle and a world news film crew, and you have a live telecast of an American policy failure.

There is another option. It can be globally deployed in the same aircraft as our airborne forces; it can also parachute out the same door they do. In its weakest level of armor protection, a .50 cal. is no threat, anti-personnel mines are not life threatening. It can up-armor two more levels to a very high level of protection beyond all hand-held weapons. It has a devastating rate of fire and, with one round, it can kill any armored vehicle on the earth. Your enemies will be wondering, how did they get tanks here so fast! The universal world-wide opinion of all armies, including the most ragtag bands, is to treat that TANK and its weapon system with great respect. The Armored Gun System may look like a light tank, but has the heart of a lion and protects its cubs with equal ferocity. If they insist on dying for their cause, they came to the right place; if not, I guess it's time for diplomacy. The M551 Sheridan proved in Panama it could do what wheel systems cannot. When cars and trucks are used as hasty barriers, then tanks, even light ones, either crush 'em, drag 'em, or blast 'em.

1SG (Ret.) JOHN BITTAY
Pittsburgh, Pa.

Author Missed Good Sources In Scout-Colt Integration Story

Dear Sir:

In response to 1LT Brennan's article about Scout-COLT integration in the Brigade Recon Troop (July-August 1999 *ARMOR*, pg. 35), his points are valid. However, Lieutenant, you have made one of the biggest errors any professional military soldier can make... not following the lessons learned by those who served before us. You would not have had the growing pains you mentioned if you had used the power of the internet, the phone, or friends. The Center for Army Lessons Learned has numerous articles on COLT operations (I read 10 of them myself). You can go to the 1st AD/ID/CAV Division websites and pull up changes to doctrine which mention COLT operations (integration, communications...etc.).

One of your biggest assets are the two remaining Armored Cavalry Regiments (the 2d, based at Fort Polk, La., and the 3d, based at Fort Carson, Colo.). Although the missions of the ACRs differ from the brigade- and division-level missions, scouts are scouts (although the 19Ds from the ACRs excel more, in my opinion), Redlegs are Redlegs. These brothers in arms have been there and done that. In the future, we must all remember the lessons learned from all military operations, whether peacekeeping, MOUT ops, or all-out armored warfare in the desert. Those AARs we write aren't wasted ideas... they are utilized.

CPT ANDREW J. KAUFMANN
G3 Aviation
Fort Carson, Colo.